

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/AT2004/000632

International filing date (day/month/year)
16.11.2004

Priority date (day/month/year)
17.11.2003

International Patent Classification (IPC) or both national classification and IPC
B41J3/54, B41J3/407

Applicant
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1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**International application No.
PCT/IT2004/000632**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-10 12
	No: Claims	11 13
Inventive step (IS)	Yes: Claims	
	No: Claims	1-13
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

- 1 The following documents are referred to in this communication:

D1 : EP 0 928 698 A (ZEBRA TECHNOLOGIES CORPORATION; ZIH CORPORATION) 14 July 1999 (1999-07-14)
D2 : GB 2 072 102 A (MAATSCHAPPIJ VAN BERKEL'S PATENT NV) 30 September 1981 (1981-09-30)
D3 : US 2003/086740 A1 (MIYAJIMA TAKEO) 8 May 2003 (2003-05-08)
D4 : EP 1 198 117 A (MATSUMOTO INC) 17 April 2002 (2002-04-17)
D5 : EP 0 834 828 A (SEIKO EPSON CORPORATION) 8 April 1998 (1998-04-08)

2 INDEPENDENT CLAIM 1

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3)PCT.

Document D1, which is considered to represent the prior art to the subject matter of claim 1, discloses (the references in parentheses applying to this document):

A printing device (20) for receipts (see figure 8), each having a first area bearing constant data (152) and a second area bearing variable data (144, 146, 148, 150), a paper supply (30) suitable for feeding through a print path, a first print unit of the ink jet type (26) a second print unit of the thermal type (24) along said path, feeding means for feeding said paper along said print path (through said decouple station), whereby to permit printing of said paper by said first and said second printing unit, characterized in that said first ink jet printing unit (26) prints said constant data and said second thermal printing unit prints said variable data for each of said receipts.

- 2.2 The subject-matter of independent claim 1 differs from the disclosure of D2 in that: The printer has no roll of paper, and no cutting means.
- 2.3 The problem to be solved by the present invention may therefore be regarded as having an easier supply of paper by providing it on a roll and cutting the paper into receipts.

- 2.4 In view of D2 the solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons:
D2 shows exactly the proposed configuration of a receipt printer with a roll of paper and a cutting mechanism. It would be a normal design option for a man skilled in the art to combine the technical features of D1 and D2 to arrive at the printing device of claim 1.
- 2.5 Therefore the features disclosed in D2 and D1 would be combined by the skilled person, without exercise of any inventive skills in order to solve the problem posed. The proposed solution in independent claim 1 thus cannot be considered inventive (Article 33(3) PCT).
- 2.6 The present application does not meet the criteria of Article 33(1) PCT, because the subject matter of claim 1 does not involve an inventive step in the sense of Article 33(3)PCT.
- 2.6.1 Document D2, which is considered to represent the most relevant state of the art to the subject matter of claim 1, discloses (the references in parentheses applying to this document):
All technical features of claim 1, especially by mentioning two separate printing mechanisms in the abstract. In the description particularly attention is paid to the problem of the waiting times and the efficiency of printing the fixed data earlier than the variable data.
- 2.6.2 The subject-matter of independent claim 1 differs from the disclosure of D2 in that :
the two types of print mechanisms are not mentioned
- 2.6.3 The problem to be solved by the present invention may therefore be regarded as
which types of printer could be best used to solve the speed problem
- 2.6.4 In view of D3 the solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following

reasons:

D3 mentions a receipt printer (POS, column 1, paragraph 4). In §5 the ink jet printer is mentioned as having slow speed. In §75 D3 discloses that a line thermal type printer can perform a high speed printing. Given the problem described in D2, an obvious choice for the two printers would be the two described in D3.

- 2.6.5 Therefore the features disclosed in D2 and D3 would be combined by the skilled person, without exercise of any inventive skills in order to solve the problem posed. The proposed solution in independent claim 1 thus cannot be considered inventive (Article 33(3) PCT).

2.7 DEPENDENT CLAIMS 2-10

Dependent claims 2-10 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

- 2.8 Claim 2; paper roll is thermal paper: see D3, §5, two colour thermal paper sheet
claim 3; plain paper and ink ribbon; design option, not inventive
claim 4; control unit; implicit in D2 and D3, where fixed data are printed before
claim 5; print fixed data immediately after cutting see D2, page 1, line 108-110
claim 6; 2nd printhead faster than 1st: see point 2.6.4 above
claim 7: 1st ink jet is colour; see D3, §5, multicolour ink jet printer
claim 8: thermal head is in line type; see D3, §4
claim 9; ink jet downstream of thermal head: implicitly in D2 when two heads are used
claim 10; further print path for single documents, see D5, not inventive

3 INDEPENDENT CLAIM 11

- 3.1 Document D2, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document):
The technical features of claim 1 as described above, combined with the following method features: each receipt is printed faster than when all data had to be printed.
From this, the subject-matter of independent claim 11 differs in that:

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- the two printers are specified being ink jet and thermal
- 3.1.1 The subject-matter of claim 11 is therefore novel (Article 33(2) PCT).
The problem to be solved by the present invention may be regarded as:
Selecting the printers that have the corresponding quality and speed.
- 3.1.2 The printers are already mentioned in D3, see also 2.6.4 above
- 3.1.3 Therefore the features disclosed in D2 and D3 would be combined by the skilled person, without exercise of any inventive skills in order to solve the problem posed. The proposed solution in independent claim 11 thus cannot be considered inventive (Article 33(3) PCT).
4. Dependent claims 12 and 13
- 4.1 Dependent claims 12 and 13 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).
- 4.2 claim 12: thermal head is faster than ink jet head: see 2.6.4. above
- 4.3 claim 13: constant data are stored: see D3, §29 where the header data are stored in a nonvolatile memory.